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WPI Acc No: 89-249860 DE 3844455\_\_DE A\_19890824\_198935

Spirometer and sample combining piece for gas analyser - has connections to pressure and flow measurement instrument and gas analyser

Patent Assignee: INSTRUMENTARIUM CORP (INST-N)

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Number of Countries: 005 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
DE 3844455	A	19890824	DE 3844455	A	19881231		198935 B
NL 8900236	A	19890901				198938	
GB 2215604	A	19890927	GB 891876	A	19890127		198939
FI 8800624	A	19890812				198945	
GB 2215604	B	19920129				199205	
US 5111827	A	19920512	US 89292933	A	19890103	A61B-005/08	199222
			US 90633979	A	19901226		

Priority Applications (No Type Date): FI 88624 A 19880211

Patent Details:

Patent	Kind	Lan	Pg	Filing Notes	Application	Patent
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DE 3844455	A		4			
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US 5111827	A		6	CIP of	US 89292933	
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Abstract (Basic): DE 3844455 A

The spirometer (18) and sample combining piece (2) are formed into a composite unit which is connected to pressure and/or flow measurement element (12,13) and can be connected via a sample tube (9) to a gas analyser (10). The combining piece (2) is mounted between an intubation tube and a respirator.

The combining piece has at least two flow outlets (6a,7a,9a) one of which is connected to the gas analyser via the sample tube. The spirometer (18) contains a pneumotachometer. At least one end of the combining piece (2) and connected to a flow rectifier which converts an asymmetrical flow into a symmetrical one.

USE/ADVANTAGE - For analysis of anaesthetised patients breathing gases. Spirometer contains sample combining piece designed for reduction in number of connecting parts and for elimination of hygiene and sterilisation problems.

2/3

Abstract (Equivalent): GB 2215604 B

A combination of a spirometer unit and a gas-analysing apparatus, said spirometer unit being connectable to an intubation tube, and wherein a spirometer is connected to a sampling connector, which sampling connector is linked to the gas analysing apparatus, said gas analysing apparatus comprising a gas analyser, a pressure-difference gauge and a microprocessor, wherein said microprocessor is adapted to compensate for the effect of gas composition on the calculation of flow from the measured pressure difference on the basis of the data issued by the gas analyser.b

Abstract (Equivalent): US 5111827 A

The respiratory device comprises a gas intubation tube to conduct a flow of gas, a gas sampling connector mounted in the tube and a spirometer mounted in the tube and spaced longitudinally of the connector. A gas analyzer is connected to the sampling connector for measuring the composition of the gas.

The spirometer including a pressure differential gauge for measuring the flow rate of the gas in the tube and a microprocessor for adjusting the measurement of the flow rate in accordance with the

measurement of the composition.

USE - In monitoring the alveolar gases of a patient during anaesthesia.

Derwent Class: P31; P34; S03; S05

International Patent Class (Main): A61B-005/08

International Patent Class (Additional): A61B-005/087; A61M-016/01;

G01N-001/22; G01N-033/49

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Sub account: ADLER/OE

\$3.49 0.016 Hrs File351

\$2.40 1 Type(s) in Format 7

\$2.40 1 Types

\$5.89 Estimated cost File351

\$0.19 SPRNTNET

\$6.08 Estimated cost this search

\$6.62 Estimated total session cost 0.030 Hrs.

### Status: Signed Off. (2 minutes)



DEUTSCHES  
PATENTAMT

②① Aktenzeichen: P 38 44 455.0  
②② Anmeldetag: 31. 12. 88  
②③ Offenlegungstag: 24. 8. 89

Behördenvermerk

DE 3844455 A1

③① Unionspriorität: ③② ③③ ③①  
11.02.88 FI 880624

⑦① Anmelder:  
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⑤④ Mit einem Intubationsrohr verbindbares Spirometer und Probenverbindungsstück für einen Gasanalysator

Die Erfindung bezieht sich auf ein Spirometer, das mit einem Einführungsrohr und einem Probenverbindungsstück für einen Gasanalysator verbindbar ist.

Das Spirometer (18) und das Verbindungsstück (2) sind derart ausgebildet, daß sie eine Einheit bilden, die mit Druck- und/oder Strömungsmeßelementen (12, 13) verbunden ist, und auch über ein Probenröhrchen (9) mit einem Gasanalysator (10).

Das Verbindungsstück (2) ist zwischen dem Intubationsrohr (1) und einem Respirator (4) angeordnet und mit mindestens zwei Abströmanschlüssen (6a, 7a, 9a) versehen. Relativ zum Abströmanschluß (9a) des Gasanalysators (10) ist das Spirometer (18) auf der Seite angeordnet, die dem Intubationsrohr (1) gegenübersteht.

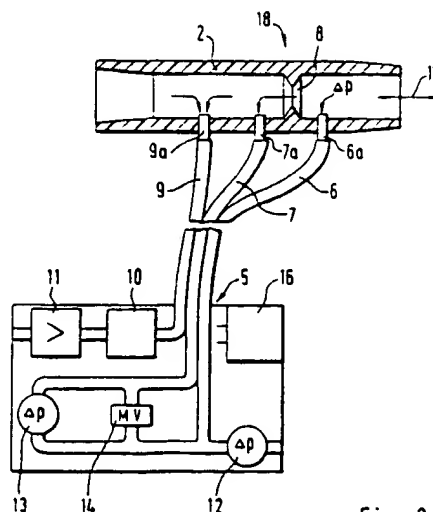


Fig. 2

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10\*

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Fig. 1

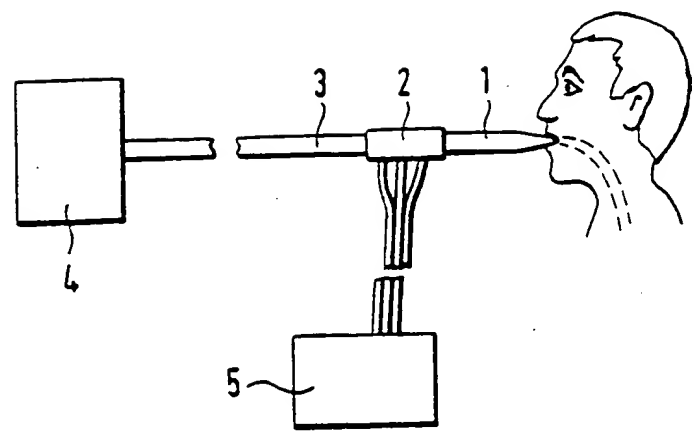


Fig. 2

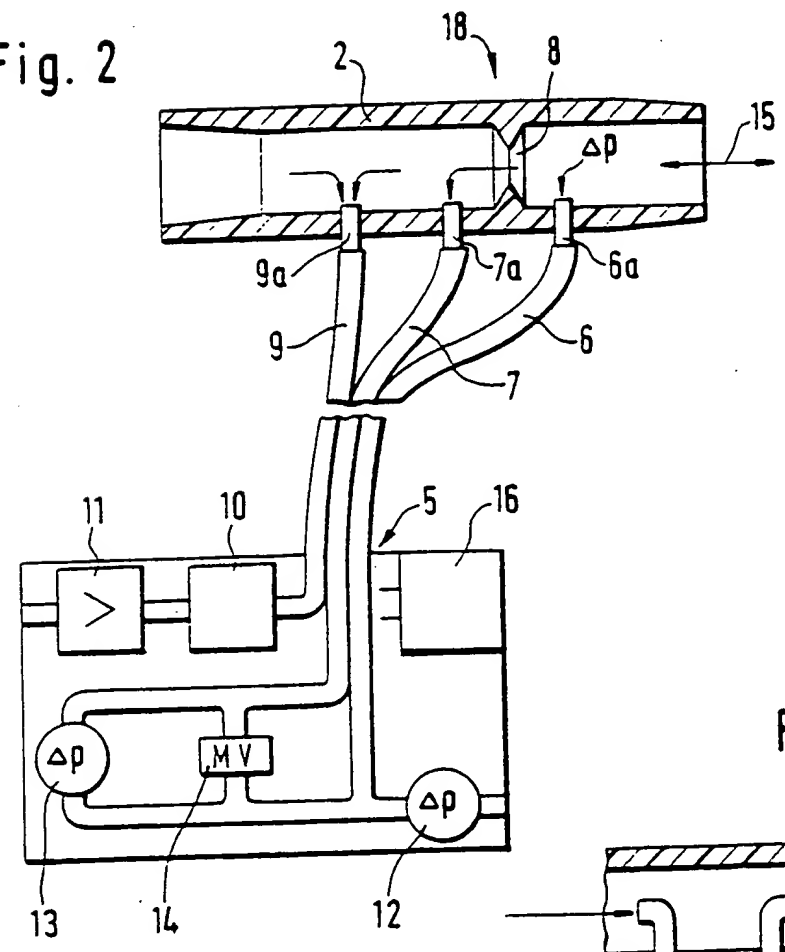


Fig. 3

